

SiGe STRAIN RELAXED BUFFER FOR HIGH MOBILITY DEVICES AND A METHOD OF FABRICATING IT

Abstract of the Disclosure

[0077] A semiconductor device is provided comprising a semiconductor substrate having on its top a Thin Strain Relaxed Buffer. The Thin Strain Relaxed Buffer consists of a stack of three layers of essentially constant Ge concentration. The three layers include a first epitaxial layer of $\text{Si}_{1-x}\text{Ge}_x$, a second epitaxial layer of $\text{Si}_{1-x}\text{Ge}_x$: C, and a third epitaxial layer of $\text{Si}_{1-x}\text{Ge}_x$ on the second epitaxial layer. A method to fabricate such a buffer is also provided.

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